REMARKS

The title is changed to the title as suggested in the office action

New drawing sheets containing corrected Figs. 4, 8 and 11 are enclosed as required by the office action. It is noted that the new Fig. 4 is not exactly the same as the original Fig. 4. Unfortunately, the original photograph from which original Fig. 4 was copied has been inadvertently destroyed or misplaced and is not available. The applicants have reproduced a substitute Fig. 4 using the composite signal consisting of a pulse series of 200 Hz and white noise (S/N: 20dB) as described in the specification on pages 33 and 34. Please note that the description on page 34, lines 6-9 states that the points in the region less than 100 Hz are random. Thus the points at such lower frequencies cannot be reproduced. Since the essential features of the original Fig. 4 are in the new Fig. 4, it does not contain any new matter.

Concerning the rejection of claims 1-6 under 35 U.S.C. §112, second paragraph, applicants request reconsideration inasmuch as the term "instantaneous frequency" is defined in the specification and is a well known term in the art. The specification beginning at page 30, about line 12, states: "The instantaneous frequency $\omega_i(t)$s of the signal s(t) can be derived from the time derivative of a phase function ..." Further, a standard text book which is well known in the art of time-frequency analysis, Leon Cohen, Time-Frequency Analysis, Prentice Hall, Englewood Cliffs, NJ, 1995 contains the description:

> "2.7 INSTANTANEOUS FREQUENCY
> Instantaneous frequency is one of the most intuitive concepts, since we are surrounded by light of changing color, by sounds of varying pitch, and by many other phenomena whose periodicity changes. The exact mathematical description and understanding of the concept

of changing frequency is far from obvious and it is fair to say that it is not a settled question. In Chapter 1 we discussed a fundamental reason why *a good definition of instantaneous frequency is the derivative of the phase*: If we do define instantaneous frequency that way, then its time average with the energy density gives the average frequency." (Emphasis added.)

The term "instantaneous frequency" as defined in the specification and as shown by the above text book extract is well known in the relevant art and thus suitable for describing a fundamental frequency of a voice whose periodicity changes continually with time. The holding in the office action that its meaning "is considered constant or as a stationary parameter" is not understood and must be withdrawn.

Concerning the specification and the amendment of references to equations, tables or drawings to be bold or in parenthesis, the undersigned attorney knows of no rule or Patent Office requirement which would require such amendment.

The application is now believed to be in condition for allowance and such favorable action is requested.

Respectfully submitted,

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